



### PERSISTENCE OF THE UMBILICAL CORD.

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WITHIN the past ten months the attention of the writer has been called in two instances to a curious condition of the umbilical cord, or rather of the stump of the cord, mention of which he has been unable to find in any of the standard text-books on obstetrics. This condition consists in a failure of occurrence of the usual phenomena attendant upon the separation of the cord; in other words, the normal line of demarkation does not form, or it is only present in part, and instead of the process of disintegration and separation being accomplished within the usual limit of from four to six days, the cord persists indefinitely, or until removed by some surgical procedure. An examination of the section of cord after this secondary amputation reveals a great excess of fibrous connective tissue with total obliteration of the vessels and an apparent fibrous degeneration of all the structures. If proper antiseptic precautions be observed prior to the secondary amputation the infants do not seem to suffer in the least from this unusual state of affairs.

The condition is quite distinct from that known as umbilical fungus, which is a true granulation-tumor forming after the spontaneous separation of the cord, and which is probably due to an excess of moisture—blood

and serum—around the part. The change in question, as has already been suggested, seems rather to be a process of fibroid degeneration without any tendency whatever to mummification. A close examination of the amniotic covering of the stump shows no attempt at ulceration at any point from the site of the ligature to the navel-ring; the distal one-third or one-half inch of the cord may, however, be somewhat mummified, but otherwise the cord presents no abnormal features. In the two cases personally encountered by the writer, separation had not occurred at the ninth and sixteenth days, respectively, and he was informed by one of the delegates to the recent convention of the American Medical Association, to whom he had made mention of the matter, that a similar case had occurred, a few months since, in his own practice, in which the cord had persisted for eight weeks, at the expiration of which time he had, at the request of the family, amputated close to the navel-ring. The tissue at this time, he said, was almost cartilaginous in density, and there was not the slightest sign of beginning separation, nor had the child suffered in the least from this unusual persistence of its umbilical appendage.

Owing to the fact that a mere fissuring had occurred on the under surface of the cord,

close to the abdominal wall, in the first of the writer's cases, thorough antisepsis of which had not been observed, the child presented, on the eighth day, the signs of septic infection with convulsions, persistent and high elevation of temperature, and a rapidly-developing omphalitis, which resulted fatally on the following day, a few hours after amputation of the cord had been accomplished. The labor in this instance had been somewhat prolonged, the child presenting in the third position of the vertex (R O P), and rotation and delivery being prevented by a marked uterine inertia; an easy forceps-delivery was accomplished, followed by a smart post-partum hemorrhage; there was no tear; the cord encircled the neck once.

The second case was the child of a primipara, who had passed through a remarkably easy labor lasting but three hours and forty-six minutes. The baby menstruated on the fourth day, the flow lasting for three days. At the time of separation of the cord, on the sixteenth day, the tissue was thoroughly organized, so much so, in fact, that no trace

of the vessels or other structures could be detected. A slight oozing of serum persisted after the amputation for two days, and then ceased.

Upon looking more closely into the probable etiology of this rare condition, it would seem quite rational to suppose that some intimate relationship must exist between the changes in the cord and the dry method of umbilical antisepsis that is practised by the majority of the present-day obstetricians. Talcum powder, lycopodium, salicylic acid and starch, boric acid, acetanilid—all have been and are constantly being employed, and it stands to reason that, if this process be carried out with the usual degree of thoroughness that the well-trained antiseptic surgeon would insist upon, the tendency would be rather to a preservation of the umbilical tissues than to their proper disintegration and separation. This is merely offered as a suggestion as to the probable causation of the persistence, although it does not explain why the condition does not result in every instance so treated.